

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
19 April 2001 (19.04.2001)

PCT

(10) International Publication Number
WO 01/27347 A1(51) International Patent Classification⁷: C23C 16/44, 16/00, C30B 25/02, H05K 3/00

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(21) International Application Number: PCT/FI00/00895

(81) Designated States (national): AE, AG, AL, AM, AT, AT (utility model), AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, CZ (utility model), DE, DE (utility model), DK, DK (utility model), DM, DZ, EE, EE (utility model), ES, FI, FI (utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KR (utility model), KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(22) International Filing Date: 13 October 2000 (13.10.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
19992234 15 October 1999 (15.10.1999) FI

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(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

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— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 01/27347 A1

(54) Title: METHOD OF DEPOSITING TRANSITION METAL NITRIDE THIN FILMS

(57) Abstract: This invention concerns a method for depositing transition metal nitride thin films by an Atomic Layer Deposition (ALD) type process. According to the method vapor-phase pulses of a metal source material, a reducing agent capable of reducing metal source material, and a nitrogen source material capable of reacting with the reduced metal source material are alternately and sequentially fed into a reaction space and contacted with the substrate. According to the invention as the reducing agent is used a boron compound which is capable of forming gaseous reaction byproducts when reacting with the metal source material.